AMENDMENTS IN THE CLAIMS

Please amend the claims as follows:

1.   (currently amended)   A system for decreasing latency of destination address resolution of packets at a network node comprising:

an aggregation utility, for aggregating multiple addresses hosted on said network node into a single representative maskaddress that includes a prefix indicating a number of relevant bits within consecutive addresses utilized within said maskaddress; and

an address resolution utility for determining destination addresses of said packets using said maskaddress.

2.   (currently amended)   The system of Claim 1, wherein said multiple addresses contain at least a single most significant bit in common to create a definable address space of consecutive addresses, wherein said mask address has a prefix variable which indicates the number of relevant bits within the consecutive addresses to be utilized within said maskaddress.

3.   (original)   The system of claim 2, wherein said aggregation utility comprises:

means for determining which of said consecutive addresses are present within said node;

means for creating said maskaddress and prefix when at least two of said consecutive addresses are present within said node.

4.   (original)   The system of Claim 3, wherein said determining means utilizes a percent aggregation rule.

5.   (currently amended)   The system of Claim 4, further comprising:

a negative address utility for determining which addresses from within said address space are not present on said network node, wherein a resulting negative address is utilized along with said mask address to efficiently select packets with destination address which are located on said network node.

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6.   (original)   The system of claim 5, wherein said negative address utility comprises:

means for determining whether a particular percentage of said consecutive addresses are present within said node;

means for creating said negative address when said particular percentage of consecutive addresses is present in said subspace.

7.   (original)   The system of Claim 1, wherein said address resolution utility includes a comparison utility for comparing said destination address with said mask address.

8.   (currently amended)   A method for efficient determination of the correct destination of a packet on a network, said method comprising the steps of:

dynamically creating a maskaddress with a prefix to represent a plurality of consecutive IP addresses located at a node;

comparing a destination address of said packet with said maskaddress to determine if said destination address is similar to said maskaddress;

when said comparing step results in a match and a negative address is affiliated with said maskaddress:

checking said destination address against said negative addresses, wherein said negative address is an address determined to be missing from a group of addresses represented by said maskaddress; and

rejecting said packet when said destination address matches said negative address; and

accepting said packet at said node when a match exists between said destination address and said maskaddresses without a match of a negative address to said destination address.

9.   (original)   The method of claim 8, wherein said creating step further includes the steps of:

determining when said node contains at least two consecutive addresses, wherein a particular number of possible consecutive addresses represents an address space; and

aggregating, in response to said determining step, said addresses within said address space to create a single representative maskaddress.

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10.   (original)   The method of Claim 9, wherein said aggregating step represents said aggregated addresses as a mask address having an associated space variable and a prefix variable, said space variable indicating a number of addresses within said space, and said prefix variable indicating a number of relevant bits to be utilized for comparisons with a destination address of a packet on said network, whereby input time for processing packets traveling on the network is reduced.

11.   (original)   The method of Claim 9, wherein said aggregating step further includes the steps of completing a percent aggregation of said consecutive addresses within said space which are present on said node.

12.   (currently amended) The method of claim 9, wherein said aggregating step further includes the steps of:

analyzing whether said space has missing addresses; and in response to a determination that said space has missing addresses, generating a corresponding negative address for each one of representing said missing addresses, wherein said negative address is utilized along with said maskaddress to determine if a particular destination address is on said node once said maskaddress matches said destination address of said package.

13.   (canceled)

14.   (currently amended) A computer program product for effectively decreasing time for destination address resolution of packets at a network node, said program product comprising:

a computer readable medium; and

program instructions on said computer readable medium for:

an aggregation utility, for aggregating multiple addresses hosted on said network node into a single representative maskaddress;

a negative address utility for determining which addresses from within said address space are not present on said network node and associating a corresponding negative address with said maskaddress, wherein the negative address is utilized along with said maskaddress to more efficiently select packets with destination addresses that are located on said network node; and

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an address resolution utility for determining destination addresses of said <u>received</u> packets using said maskaddress <u>and said negative address</u>.

15.   (original)   The computer program product of Claim 14, wherein said program instructions for said aggregating utility comprises program instructions for:

creating said maskaddress when said multiple addresses contain at least a single most significant bit in common to create a definable address space of consecutive addresses; and

determining a prefix value for said maskaddress that indicates the number of relevant bits within the consecutive addresses to be utilized within said maskaddress

16.   (original)   The computer program product of Claim 15, further comprising program instructions for utilizing a percent aggregation rule to create said maskaddress.

17.   (canceled)

18.   (original)   The computer program product of Claim 17, wherein said program instructions for said negative address utility includes program instructions for:

determining whether a particular percentage of said consecutive addresses are present within said node;

creating said negative address when said particular percentage of consecutive addresses is present in said subspace.

19.   (original)   The program product claims of Claim 18, wherein said program instructions for said address resolution utility includes program instructions for a comparison utility for comparing said destination address with said maskaddress.

20.   (original)   The computer program product of Claim 15, wherein said program instructions for said percent aggregation rule utilizes a 75 percent aggregation rule.

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